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Agricultural Memorandum No 760

Variations of weather factors about the (1941-70) average

L P Smith

The variations about the average, in terms of 1 in 10 extremes and quartiles are included in the forthcoming MAFF Agroclimate Bulletin. The appendix includes a simplified summary of these data.

The ranges of deviations in this summary can apply to time (month) or location (in UK).

The variations of soil moisture balance factors are given in detail in Tech. Bull. No.24.

Any comments or suggestions on this paper should be referred to the author.

Meteorological Office
Bracknell

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APPENDIX

		Lower 1 in 10	Lower Quartile	Upper Quartile	Upper 1 in 10	
Air Temp	D.J.F.	-2.9 to -3.9	-0.9 to -1.2	+0.9 to +1.2	+2.6	
	M.A. May	-1.8 to -2.3	-0.7 to -1.0	+0.7 to +1.0	+1.8 to +2.5	
	J.Jy.A.	-1.9 to -2.1	-0.6 to -0.9	+0.6 to +0.8	+1.8 to +2.3	
	S.O.N.	-2.0 to -2.9	-0.7 to -0.8	+0.7 to +0.9	+2.1 to +2.2	°C
Earth Temp (30 cm)	D.J.F.	-2.6 to -3.3	-1.2 to -1.6	+1.2 to +1.5	+2.7 to +3.4	
	M.A.May	-2.5 to -3.6	-1.1 to -1.4	+1.0 to +1.5	+2.6 to +3.1	
	J.Jy.A.	-2.0 to -2.6	-1.0 to -1.2	+0.9 to +1.1	+2.4 to +2.9	
	S.O.N.	-2.5 to -3.6	-1.0 to -1.2	+1.0 to +1.3	+2.6 to +3.3	°C
Rainfall	1 month	20 - 25	59 - 62	132 - 134	205 - 207	
	3 months	49 - 53	76 - 77	119 - 121	159 - 160	
	6 months	59 - 63	83	115 - 116	144	
	12 months	73	88 - 91	109 - 112	130 - 135	%
Potential Transpiration	Summer	- 28 to -41	-15 to -20	+15 to +20	+27 to +42	
	Apr Sept	- 5 to -11	- 3 to - 6	+ 3 to + 6	+ 5 to +11	
	May Aug	- 9 to -16	- 5 to - 9	+ 5 to + 9	+ 9 to +16	
	June Jul	-12 to -21	- 6 to -14	+ 6 to +14	+12 to +21	mm
Sunshine	D.J.F.	52 to 59	78 to 84	118	145 to 155	
	M.A.May	58 to 66	79 to 85	115 to 117	142 to 154	
	J.Jy.A.	59 to 66	81 to 85	115 to 118	134 to 147	
	S.O.N.	57 to 67	79 to 86	113 to 119	137 to 152	%
Radiation		84	92	107	119	%
Illumination	Summer	84	92	107	119	
	Winter	86	94	106	116	%
Growing Season	Lowlands	-35	-14	+21	+35	
	Hills	-25	-14	+14	+25	days
Grazing Season		-40 to -45	-20	+33	+60 to +65	days
Potential Transpiration (growing season)		85 to 92	89 to 96	104 to 111	108 to 117	%
Effective Transpiration (growing season)	Low Rain	75 to 79	86 to 88	112 to 114	120 to 124	
	Medium Rain	81 to 84	90 to 92	109 to 111	114 to 118	
	High Rain	86 to 94	93 to 98	103 to 108	106 to 112	%
Day-degrees above 10°C		82 to 87	90 to 94	106 to 110	116 to 125	%
Day-degrees below 0°C		25 to 60	66 to 75	125 to 133	175 to 225	%